IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Hisashi Saiga, et al EXAMINER: Basom, Blaine T.

SERIAL NO.: 09/646,194 GROUP: 2173

FILED: September 14, 2000

FOR: DATA DISPLAYING APPARATUS

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Commissioner for Patents
P.O. Box 1450
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Sir:

APPELLANTS' BRIEF ON APPEAL
SUBMITTED PURSUANT TO 37 C.F.R. §41.37

In support of Appellants' Notice of Appeal, dated November 10, 2009, from the Examiner's Final Rejection of Claims 28, 31-38, 41-47,50 and 53-55 , mailed on May 12, 2009, Appellants respectfully submit the following Appellants' Brief on Appeal.

BRIEF ON APPEAL FEE

Authorization to charge Deposit Account No. **04-1105** in the amount of $540.00 to cover the cost of this Appeal Brief fee and in the amount of $130.00 to cover the cost of a one-month extension of time to file this Appeal Brief are hereby provided. In addition, if for any reason an additional fee is required to be paid, a fee paid is inadequate or a credit is owed for any excess fee paid, the Commissioner is hereby authorized and requested to charge (or credit) Deposit Account No. **04-1105**.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1205.2:

I. Table of Authorities
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I. TABLE OF AUTHORITIES

a. Case Law

In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) 21

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35 USC 103(a) 19, 20, 21, 37, 38, 40, 52

II. STATEMENT OF REAL PARTY IN INTEREST

The real party in interest is Sharp Kabushiki Kaisha, having a principal place of business at 22-22, Nagaike-Cho, Abeno-ku, Osaka-shi, Osaka, JAPAN 545-8522. An assignment of the above-identified application from the inventors Hisashi SAIGA, Yuji SAWADA, Keisuke IWASAKI, Masafumi YAMANOUE, Yoshihiro KATAMURA, Hitoshi HIROSE and Shigeki KUGA to Sharp Kabushiki Kaisha was recorded in the United States Patent and Trademark Office on 14 September 2000 at Reel 011140/ Frame 0720.

III. STATEMENT OF RELATED CASES

There are no prior or pending appeals, interferences or judicial proceedings known to Appellants, Appellants' representatives, any of the above-identified Assignees (inventors), the above-identified Assignee's (inventors') representatives, or to any inventors, any attorneys or agents who prepared or prosecuted the application on appeal and/or any other person who was substantially involved in the preparation or prosecution of the application on appeal, and that are directly related to, directly affect, or would be directly affected by, or have a bearing on, the Board's decision in this Appeal.

IV. STATUS OF CLAIMS

A. Total Number of Claims in Application

There are 20 claims actively pending in application.

B. Current Status of Claims

Claims canceled, without prejudice: - Claims 1-27, 29-30, 39-40, 48-49 and 51-52

Claims withdrawn from consideration but not canceled: - none

Claims pending: - 28, 31-38, 41-47, 50 and 53-55

Claims allowed: - none

Claims rejected: - 28, 31-38, 41-47, 50 and 53-55

C. Claims On Appeal

The claims on appeal are claims 28, 31-38, 41-47, 50 and 53-55

V. STATUS OF AMENDMENTS

Claims 28, 31-38, 41-47, 50 and 53-55 as amended in Applicants' Amendment of 22 January 2009 in the above-identified application are pending on this Appeal. A clean set of the presently pending claims is reproduced in the attached Appendix Claims Section.

Applicants' Amendment After Final Rejection Under 37 CFR 1.116 of 11 September 2009 was denied entry by the Examiner in the Advisory Action dated 9 October 2009, and the claim amendments contained therein have not been entered (for purposes of this Appeal or otherwise) in this application.

VI. SUMMARY OF CLAIMED SUBJECT MATTER

As will appear more fully below in the recitation of the presently pending claims including interlineations in italics specifying the support in the present specification for the various limitations thereof, the presently claimed subject matter is described in the present specification primarily in connection with Embodiment 3 at Pages 79 to 94 and FIGS. 32 through 45. Summarily stated, Appellants respectfully submit that the present invention stores the display data associated with an entire document or the like, which includes image object data, management information associated with each stored image object data and scroll information associated with each object image data, in distinct, separately controllable, pre-specified units (i.e., files) each containing only a portion of all of the display data. Thus, it will be understood that in the present invention the management information and scrolling information associated with each image data object is maintained in association with it in the pre-specified unit (file) within which it is stored, and that a complete formatted document is reproduced using the management information and scrolling information of the various distinct units (files) in linked association with one another.

(See Abstract as submitted on 15 September 2004 in response to Examiner requirement and subsequently accepted that states "A data storage medium with display data recorded thereon such that the display data is recorded in the form of one or more pre-specified units that each include all of the display information and scroll display information associated with the display data therein necessary to the scroll display of that display data. The scroll display information specifies the scroll path of the display data as line segments along which scrolling is to be conducted. The line segments have different directions in a co-ordinate system defined by the pre-specified unit according to co-ordinate values assigned to the display data in the pre-specified unit.")

Further, Appellants respectfully submit that it is to be recognized that the pre-selected units (files) of the present invention - defined as "a page" in the present specification - define their respective scroll path information in terms of co-ordinate values within a co-ordinate system defined by the pre-selected unit (file). Accordingly, the present invention allows complicated scroll paths to be laid out within each pre-selected unit which itself defines a complicated display information layout.

The novelty and nonobviousness of the claims of this application will be discussed in detail below. Suffice it to note at this stage that with respect to the claims that are currently the subject of this Appeal, Appellants respectfully submit that it will be understood that specific support for the various limitations thereof appears in the present specification at least as follows:

28. (Rejected) A data storage medium *(see generally reference numeral 1 in FIG. 1, FIG. 42 and page 79 last full sentence)*for use with a display device *(see generally FIG. 1, reference numerals 2 and 3, FIG. 42 at reference numeral 185, and first full paragraph of page 87)*said data storage medium having recorded thereon a plurality of pre-specified data units that together define a single complete document *(see page 80, line 7 to page 81, line 24, FIGS 32 and 33, ,*

wherein

each pre-specified data unit *(see Figs. 32 and 33 and related text)* includes (i) a series of display elements for display by the display device *("objects" as described at page 81, first full paragraph, in "page data area" FIGS 32 and 33)*, and (ii) management elements associated with said display elements *(see Page 80, line 7 to page 81, line 24 and the management and scroll information areas of FIGS 32 and 33)*, said management elements including all information necessary for the display device to display a predetermined sequence of said display elements as a scroll display *(see Page 84, line 13 to page 85, last line)*, and

wherein

said predetermined sequence of said display elements includes an interval or intervals that sequentially together form a scroll path, each said interval being specified by a line segment defined by coordinate values of a starting point and an end point in a coordinate system defined by said pre-specified unit corresponding to coordinate values assigned to the display elements in said prespecified unit, such that the display elements forming the intervals defining said scroll path are respectively sequentially displayed from said starting point to said end point thereof as said scroll path is displayed by said display device *(See page 81, first full paragraph, and Page 84, first full paragraph to Page 87, line 6, as well as Page 90, line 20 to Page 94, line 3).*

31. (Rejected) A data storage medium as defined in claim 28,

characterized in that said predetermined sequence of display elements also includes linking means for causing said display device to link an end point of a first scroll display path with a starting point of another scroll display path. *(see paragraph bridging pages 82 and 83)*

32. (Rejected) A data storage medium as defined in Claim 28,
characterized in that said management elements include elements for controlling a scroll display speed. *(see second full paragraph on page 83)*

33. (Rejected) A data storage medium
as defined in claim 28, characterized in that the management elements include management elements associated with selected areas of said coordinate system defined by said pre-specified unit associated with said selected ones or said contiguous groupings of said display elements for scroll display. *(see first full paragraph of Page 81)*

34. (Rejected) A data storage medium
as defined in claim 28, characterized in that the management elements include management elements specifying a scale of enlargement or reduction of said display elements or contiguous groupings of display elements located along a scroll path for scroll display. *(see paragraph bridging pages 84 and 85)*

35. (Rejected) A data storage medium according to Claim 28

wherein the management elements in each pre-specified data unit include display information and scroll display information *see only full paragraph on Page 80) and FIGS 32 and 33)*, and

wherein the scroll display information includes synchronous reproduction information for specifying non-motionless display elements to be reproduced in synchronism with a scroll display of other display elements. *(see only full paragraph on Page 84 and Page 85, lines 17 – 21)*

36. (Rejected) A display device for displaying display elements stored on a data storage medium as defined in any one of claims 28, 31, 32, 33, 34 or 35, comprising a display controller for performing a scroll display of said predetermined sequence of said display elements. *(see Fig. 41 and Page 86, line 1 to Page 87, line 23)*

37. (Rejected) A display device as defined in claim 36, further comprising a scroll indicating means for scroll display , and wherein said scroll display is conducted only while a user instructs said display controller to perform scroll display in either forward or backward directions along a scroll path *(See paragraph bridging Pages 89 and 90).*

38. (Rejected) A data storage medium for use with a display device *(see generally reference numeral 1 in FIG. 1, FIG. 42 and page 79 last full sentence)*, said data storage medium having display data associated with a single complete document recorded thereon *(see page 80, line 7 to page 81, line 24, FIGS 32 and 33)*, said display data including a plurality of image data objects for display on a display screen of said display device and all management information associated with each of said image data objects required by said display device for the scroll display, thereof *(see Page 84, line 13 to page 85, last line)*,, comprising:

a computer readable medium on which said display data is recorded in the form of distinct files *(see Page 80, first full paragraph)*, each said distinct file containing a pre-selected portion of said display data including at least one of said plurality of image data objects along with all of the respective associated management information required by said display device for the scroll display, thereof, wherein said management information includes scroll path information including and interval or intervals that together form a scroll path, each said interval being specified by a line segment defined by coordinate values of a starting point and an end point in a coordinate system defined by said distinct file corresponding to coordinate values assigned to said image data objects in said distinct file,

such that the image data objects forming the intervals defining said scroll path are respectively sequentially displayed from said starting point to said end point thereof as said scroll path is displayed by said display device *(See page 81, first full paragraph, and Page 84, first full paragraph to Page 87, line 6, as well as Page 90, line 20 to Page 94, line 3).*

41. (Rejected) A data storage medium

as defined in claim 38, characterized in that the management information associated with the image data objects contained in each one of said distinct files includes information for linking a scroll display of selected ones or contiguous groups of image data objects contained in that file with selected ones or contiguous groups of image data objects located on a scroll path contained in at least another one of said distinct files. *(see paragraph bridging pages 82 and 83)*

42. (Rejected) A data storage medium

as defined in claim 38, characterized in that the management information associated with the image data objects or contiguous groups of image data objects in each said distinct file required for the scroll display of said image data objects or contiguous groups of said image data objects includes scroll display speed information. *(See paragraph bridging pages 92 and 93)*

43. (Rejected) A data storage medium as defined in claim 38,

characterized in that the management information required by said display device for the scroll display of said image data objects or contiguous groups of said image data objects includes information specifying a scroll display area on a display screen of said display device within which said scroll display of said image data objects or said contiguous groups of said image data objects is to occur. *(See, paragraph bridging pages 83 and 84)*

44. (Rejected) A data storage medium as defined in claim 38,

characterized in that the management information required by said display device for the scroll display of said image data objects or said contiguous groups of said image data objects includes information specifying a scale of enlargement or reduction of a display area for scroll display on a display screen of said display device within which said scroll display is to occur *(see paragraph bridging pages 83 and 84)*.

45. (Rejected) A data storage medium

as defined in claim 38, characterized in that said management information required for scroll display by said display device associated with said image data objects or contiguous groups of said image data objects includes synchronous reproduction information for specifying other image data objects to be displayed in synchronism with the scroll display of each said image data object or contiguous groups of image data objects.*(See second full paragraph of Page 83)*

46. (Rejected) A display device for displaying

image data objects or contiguous groups of image data objects contained in at least one distinct file recorded on a data storage medium as defined any one of claims 38, 41, 42, 43, 44 or 45, comprising a display controller performing scroll display of said image data objects or contiguous groups of said image data objects located on a scroll path based on management information associated with those image data objects or contiguous groups of said image data objects required by said display device for the scroll display thereof. *(See paragraph bridging pages 86 and 87)*

47. (Rejected) A display device as defined in claim 46, further

comprising a scroll indicating means for monitoring the scroll

display of said image data objects or contiguous groups of said image data objects on a display screen of said display device, wherein said scroll display is conducted based on the management information only while a user instructs said display controller to perform said scroll display in either forward or backward directions along a selected scroll path. *(See paragraph bridging pages 89 and 90)*

50. (Rejected) A data storage medium according to claim 28, wherein vectors connect the intervals of said scroll path; and

wherein said display device conducts a sequential display of said predetermined sequence of display elements along each of the sequence of intervals in said scroll path as determined by said vectors. *(See second full paragraph of Page 83)*

53. (Rejected) A data storage medium according to claim 38, wherein vectors connect the intervals of said scroll path, and

wherein said display device conducts a sequential display of said image data objects or contiguous groups of image data objects along each of the sequence of intervals in said scroll path as determined by said vectors. *(See second full paragraph of Page 83)*

54. (Rejected) A data storage medium as defined in claim 28, characterized in that the scroll display control information includes a scale of enlargement or reduction of a display area for scroll display on a screen of said display device. *(See paragraph bridging pages 87 and 88)*

55. (Rejected) A data storage medium

as defined in claim 38, characterized in that the management information required by said display device for the scroll display of said image data objects or contiguous groups of image data objects includes a scale of enlargement or reduction of a display area for scroll display on a screen of said display device. *(See paragraph bridging pages 87 and 88)*

VII. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on this Appeal, are:

1. Whether claims 28, 33-38, 41, 43-47, 50 and 53-55 are obvious within the meaning of 35 U.S.C. §103(a) over the" Portable Document Format Reference Manual, Version 1.2", which is attributed to Bienz, et al. in view of U.S. Patent No. 5,634,064 to Warnock et al. further in view of U.S. Patent No. 6,599,324 to Saito, et al.; and

2. Whether claims 32 and 42 are obvious within the meaning of 35 USC 103(a) over the combination of references mentioned in item 1 above further in view of Japanese Patent No. 5-323941 attributed to Michihiro Ota.

VIII. ARGUMENT

A. STANDARDS OF OBVIOUSNESS UNDER 35 USC 103(A)

The standards required to be satisfied in order to support a holding of "obviousness" under 35 USC 103(a) are well defined as follows:

> "To establish a *prima facie* case of obviousness under Section 103, Title 35 United States Code (35 USC §103), three basic criteria must be met. First, ***there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings***. Second, there must be a reasonable expectation of success. Finally, ***the prior art reference (or references when combined) must teach or suggest all of the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants' disclosure***." *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (See, Manual of Patent Examining Procedure §2142 (8th Edition), at page 2100-2121, *et seq.*) *Emphasis added*

Accordingly, unless the Examiner establishes a satisfactory ***prima facie*** case in support of his rejections under 35 USC 103(a), his rejections should be vacated on this Appeal.

B. DISCUSSION

In the context of this Appeal, Appellants respectfully submit that the Examiner's various interpretations and combinations of the cited art are in error and/or fail to establish the required *prima facie* case in support of the currently outstanding rejections under 35 USC 103(a).

The Examiner has finally rejected Claims 28, 31-38, 41-47, 50 and 53-55 based essentially upon the belief that the so-called Portable Document Format ("PDF") Reference Manual discloses documents stored as files in a computer memory that comprise data to be displayed, in addition to all the display information and scroll display information necessary for the display of the data, i.e., "pre-specified units" as herein claimed. (see, for example, outstanding Final Rejection at Page 3, first paragraph). Appellants, however, since very early during the prosecution of this application have made it abundantly clear that a so-called PDF file is not the same as the presently claimed pre-specified data units and/or distinct files. For example, as stated at pages 12-16 of the Amendment of 22 December 2003 it was stated that:

> Applicants appreciate the Examiner's detailed analysis of the present claims in light of the newly cited Portable Document Format Reference Manual. Unfortunately, however, Applicants must respectfully submit that the newly cited reference, like the Warnok, et al reference previously cited and distinguished from the claims of this application, is directed to storing an ***entire document or the like*** in a computer memory as a so-called "PDF (Portable Document Format) document".

The difference between reference relied upon in support of the previous rejection and the reference relied upon in support of the present rejection is as follows. In the previously relied upon reference the components of an article contained within a document and the so-called "thread" connecting (associating) those components with one another was added (accomplished) **after** the document had been stored. On the other hand, in the presently relied upon reference, the definition and association of article components are accomplished **concurrently with** the storage of the document. Applicants respectfully submit, however, that this distinction is insufficient to justify the Examiner's rejections (i.e., to render the currently pending claims unpatentable).

More particularly, despite the Examiner's detailed analysis of the Portable Document Format Reference Manual upon which he currently relies, the fact remains that present invention stores the display data associated with an entire document or the like, which includes image object data, management information associated with each stored image object data and scroll information associated with each object image data, **in distinct, separately controllable pre-specified units (i.e., files) containing only a portion of all of the display data.** This is different from the so-called dynamic formatting referred to by the Warlock, et al. reference as being unsatisfactory as well as being different from the disclosures of the newly cited Portable Document Format Reference Manual in which it is necessary to store the ***entire document or the like*** in a computer memory as a so-called "PDF (Portable Document Format) document".

The manner in which the Portable Document Format Reference Manual describes the individual elements of that format relative to the way in which it actually works is unfortunate in the present context because the foregoing distinctions are not clear. This is believed to be the result of the fact that the PDF Reference Manual attempts to describe the Portable Document Format from the perspective of each of its different levels of complexity separately as a means of aiding program developers and others in the use of its various features.

Applicants respectfully submit, however, that a close reading of the PDF Manual clearly suggests that while the Examiner's factual analysis concerning the "bead" concept of identification of article segments and the page co-ordinate definition of each article segment seems to be supported by the PDF Manual, the Examiner has forgotten (or not noticed) that ***no matter how one approaches the PDF format, it is necessary in the use of each pre-specified unit (page, or article portion in the present context) to refer back to information stored as part of the whole PDF file outside of the so-called "pre-specified unit" (Note: the PDF Reference Manual discusses PDF files as representative of entire documents including a header, a body, a cross-reference table and a trailer (see chapter 5) wherein the body is made up of various indirect objects such as fonts, pages and sampled images, see page 62).***

Thus, despite other similarities to the present invention, in the article and/or page context, the PDF Reference Manual makes it clear that each selected portion of a so-called page that is defined by the so-called "beads" must refer back to the so-called "Contents" parameter of the page of which it forms a part. Hence, each article portion must refer back at least to the page information from which it is extracted in order to be appropriately utilized in a scrolling display of an entire article (particularly an entire article having different portions on different pages).

In fact, while it may be possible to create PDF pre-specified units containing separate document pages, there is no provision for saving the defined article segments as pre-specified units (Claim 28) or distinct files (claim 38). Further, while the PDF Manual at certain points seems to broadly suggests that each so-called "page" may be basically separate unto itself as an abstract concept, the true, real world fact is that at least part of the display information and associated scroll information for each such page depends upon information created and saved in the body portion of the PDF file outside of the page in question during the course of the creation and saving of an entire PDF format type document.

In other words, the pre-specified units of the present invention to the extent that they individually represent pages or article portions contain within themselves their own display information and scroll display control information. The PDF Document Format, on the other hand, does not truly contemplate that each so-called "page" is to be a pre-specified unit in the sense of the present invention. This is because the display control and scroll display information, for example the required drivers, are embedded in the PDF file and associated with the data to be displayed by higher level operators associated with the data via catalogs that assemble the various objects making up the body of the PDF file to achieve the desired document display. Thus, while the PDF Reference Manual at first reading appears to be discussing the manipulation of documents, pages of documents and article threads running through the documents, a more detailed reading of that manual suggests that the foregoing is but the highest level of explanation of the actual PDF concept.

When reduced to its basics, therefore, the PDF concept stores documents in the form of pages separately from at least some of the data contemplated as being necessary for display of the individual data, and separately from all of the other information necessary for the association of that data in the form of appropriate control sequences including the parameters required to achieve the association and control of the display of various combinations of the data as desired. Accordingly, the PDF Manual suggests that the PDF concept might be characterized as including a PDF file containing all of the information making up the document in

a database sort of collection (the so-called "body") including various levels of association of that data that can be accessed and displayed or otherwise used. Hence, it is clear that the so-called "threads" connecting the various portions of an article in the PDF Reference Manual are not the same as (or even akin to) the vectors within the article components of the present invention as has been clarified by the above-proposed amendment of Claims 28 and 38. In particular, as hereinabove proposed to be amended, those claims now incorporate the subject matter of previously dependent Claim 28 and/or 38 (which now are proposed to be canceled).

In support of this interpretation, Applicants respectfully call attention to the fact that at page 27 of the PDF Manual it is indicated that a PDF file contains a PDF document ***and other supporting data***. Further, the PDF Manual states that **in addition to a document a PDF file contains** ***the version of the PDF specification and information about the location of important structures within the file***. Further, at page 28 the PDF Manual indicates that the required printer driver consists of a stream of commands ***that are converted into PDF operators which are embedded in the PDF file.*** Also, at page 62 the PDF Manual indicates that the body of a PDF file consists of a sequence of indirect objects representing a document, and that ***those objects represent components of the document such as fonts, pages and sampled images.***

> Hence, it is not surprising that in the discussion of optimized PDF files the PDF Manual notes that it is contemplated that ***the pages will share objects and resources.*** It also is not surprising that the various pages are contemplated to have ***common attributes and that those attributes may and will be "inherited" from the preceding page unless otherwise specified.*** **See, pp 77-78; Section 7.4 and pp. 254, 270 and 274.**
>
> Accordingly, as emphasized above the PDF Manual does not disclose that the management information and scrolling information associated with each image data object is maintained in association with it in the pre-specified unit (file) within which it is stored, and that a complete formatted document is reproduced using the management information and scrolling information of the various distinct units (files) in linked association with one another.

Accordingly, while the PDF Reference Manual discloses in detail a way of selecting various article portions and moving a display of those various article portions among the elements of a Content data base, that movement from one article portion to another ***within*** a given PDF file is respectfully submitted to be inapposite to the present invention. Such selective movement around the confines of a database wherein the formatting of the document is stored separately from the contents is not the same as the present invention. Hence, as will be seen below, the fact that document content can be stored in separate units to segregate classified data from non-classified data for example as alleged to be shown by Saito is irrelevant to the scroll path in the present invention or to the sequence in which the individually defined blocks of data are simultaneously displayed as units within the PDF Document Format. Further still, the fact that the individual blocks of simultaneously displayed data of a given file may be zoomed or panned as in Warnock to fit the size of the available display device has nothing to do with the

sequential display of the pre-specified data units or files of the present invention along the defined scroll path.

In other words, as will be seen in greater detail below, the art cited an relied upon by the Examiner does not teach a plurality of separate PDF documents that form a document. Rather, it teaches a document in the so-called PDF format wherein the Content data is stored separate from the management and display data. Appellants respectfully submit that the fact that the PDF Reference Manual explains how to select article portions from the content data and to move from the simultaneous display of one grouping of such content data to the simultaneous display of another grouping of content data ***within the defined PDF File*** is distinct from the present invention and perhaps explicative of the Examiner's apparent misconceptions of the present invention *vis a vis* that art upon which he has relied,

For example, in the latter regard, Appellants respectfully note the Examiner's comments at the very end of the currently outstanding FINAL Official Action whereat he states that:

> Further, regarding the pending claims, the Applicants argue that the presently claimed "scroll path" is distinguished from the scroll path described by Bienz (i.e., the PDF Reference Manual). The Applicants argue that the "scroll path" of the present invention is the actual content of a prescribed path from display element to display element, not from block of display elements to block of display elements as in the PDF Reference Manual, i.e., the scroll path of the present invention is directed to the ***sequential*** display of words that make up the text of an article of interest(s), as opposed to the sequential display of blocks of text as in the PDF Manual.

These arguments have been considered, but are moot in view of the new grounds of rejection presented hereinabove, which are required in response to Applicants' amendments. ***(Emphasis Added)***"

In this regard, Appellants have failed to note anywhere in the currently outstanding Official Action whereat the Examiner has responded to the argument that he himself has deemed to be moot. Indeed, as will be seen below, it appears that the Examiner somehow feels that his cited art taken in combination allows him to construe each separate file of the Saito reference, for example, to be a single display element along with its associated management and display information in the PDF Reference Manual form.

Appellants respectfully submit, however, that this interpretation is well beyond the teachings, disclosure or suggestions of the cited art and constitutes at best a hindsight reconstruction of the Saito and like references that attempts to recreate Applicants' claimed invention with the aid of the hindsight knowledge of Applicants' disclosure. Thus, as far as Appellants have been able to understand the Examiner's position as stated in the currently outstanding Final Official Action, the Examiner has not satisfactorily dealt with the foregoing so-called moot argument either as argued by Appellants in their last submission or as clarified further by the above-Amendment.

Hence, it will be seen below and throughout the currently outstanding Final Official Action that the Examiner has taken apparently divergent positions regarding what the "scroll path" as defined in the present claims is relative to the elements of the cited art upon which he relies. Appellants, on the other hand, respectfully submit that the "scroll path" of the present invention is distinctly different from the scroll paths discussed by the Examiner with respect to the cited art. Consequently, Appellants respectfully submit that the Examiner's position is *prima facie* insufficient to defeat the patentability of the presently claimed invention.

For example, at lines 5-6 of page 5 of the currently outstanding Official Action, the Examiner indicates that "...a thread is considered a scroll path along which scrolling through a document is to be conducted". ***Appellants do not agree***. At best a "thread" as defined in the PDF Reference Manual acts like a vector in the present invention in that it operates to connect one end of one portion of a rectangle defining a portion of the scroll path to the start of another rectangle defining another portion thereof. In other words, the "threads" are not equivalent of the presently claimed "scroll path" (nothing in the "thread" teaches, discloses or suggests anything about the sequence in which the contents elements within each block are to be displayed or read).

Furthermore, the last full paragraph on page 5 of the currently outstanding Official Action is instructive on this point because the Examiner again mixes up the teachings and disclosures concerning the Bienz "thread" with those of the present specification concerning what the "scroll path" is. Accordingly, it will be seen that in that paragraph, the Examiner states:

> Bienz thus presents a pre-specified unit of display data (i.e., a PDF file), which includes (i) a series of display elements (e.g., graphic objects) for display by the display device, and (ii) management elements associated with the display elements the management elements including all of the information necessary for the display device to display a predetermined sequence of said display elements as a scroll display, and wherein the predetermined sequence of the display elements includes an interval (i.e., bead) or intervals that sequentially together form a scroll path (i.e., thread – ***Applicants disagree with the Examiner's use of the term "thread at this point of his discussion***), each interval being specified by line segments defined by

> coordinate values of a starting point and an ending point in a coordinate system defined by the prespecified unit corresponding to coordinate values assigned to the display elements in the prespecified unit, as claimed ***Bienz, however, does not explicitly disclose that the display elements forming the intervals defining the scroll path are respectively sequentially displayed from the starting point to the ending point thereof as the scroll path is displayed by the display device, as required by Claims 28 and 38. Moreover, Bienz fails to explicitly disclose that the plurality of such prespecified units, i.e., PDF files, may be used together to define a single complete document, as expressed in Claims 28 and 38.***

See also Page 9 of the currently outstanding Official Action whereat the Examiner has stated in the only full paragraph that "...Each bead includes an R parameter, which as shown above, delineates specific document content by means of four coordinate values (*two sets of parallel line segments as the Examiner described elsewhere in the current Official Action*) these coordinates defining a rectangle about the content. The beads are linked into a common thread so that the user may scroll ***from bead to bead*** in order to read an entire article, whereby each bead, the content bounded by this rectangle is displayed at an appropriate zoom level....Thus, the scroll display control information taught by Bienz includes information, specifically the rectangle identified by the R parameter, which intrinsically specifies a scale of enlargement or reduction of the display area for scroll display." (based upon the size and configuration of the available display device screen).

Thus, according to the Examiner, the "scroll path" has several different meanings, namely: the "thread" of the PDF Reference Manual that runs between the "beads", a sequence of display elements, or an interval (bead) or intervals (beads) that include display elements that may or may not be displayed sequentially, among other potential definitions. As will become more apparent below, this imprecise and divergent series of definitions of what exactly constitutes a "scroll path" in the present invention versus the prior art relied upon by the Examiner is respectfully submitted to be demonstrative of the Examiner's failure to adequately support his allegations concerning the unpatentable nature of the present claims of this application. Appellants respectfully submit that the problem here may reside in the Examiner's erroneous conceptualization that the "thread" is somehow part of an equivalent of the claimed "scroll path" to that herein claimed. In this regard, Appellants agree that the "thread" might be likened to the vectors of the presently claimed "scroll path" even though the "threads" connect the actual elements of the "scroll path" only in the form or collective rectangular groupings of individual display elements without any direction as to the sequence in which thus various display elements are to be displayed along the "scroll path".

Despite the foregoing imprecise definition of a scroll path, the Examiner nevertheless goes on to attempt to summarize the position that he is taking at page 7 of the currently outstanding Official Action whereat he states that:

> Accordingly, it would have been obvious to one of ordinary skill in the art having the teachings of Benz, Warnock and Saito before him at the time that the invention was made to implement the PDF format taught be Bienz and Warnock to create a plurality of PDF files, each describing a single portion of a document like Saito. It would have been advantageous to one of

> ordinary skill to utilize such a combination because it would allow the user to specify different access rights for different portions of the document as suggested by Saito. Accordingly, Bienz, Warnock and Saito are considered to teach one of ordinary skill in the art a data storage medium (i.e., computer memory) like that of Claim 28 which is for use with a display device, the data storage medium having recorded thereon a plurality of pre-specified data units (i.e., PDF files) that together define a single complete document recorded thereon. Similarly, Bienz, Warnock and Saito teach a data storage medium like that of Claim 38 the data storage medium having a display associated with a single complete document recorded thereon the display data including a plurality of image data objects for display on a display screen of a display device and all management information associated with each of the image data objects required by the display device for scroll display, thereof.

It is Appellants' belief in the latter regard that it is substantially correct to define the structure represented by the PDF Reference Manual as being a "thread" or "threads" that link one or more "beads" so that a user may read an entire article by scrolling from one article bead to the next along the thread, rather than from one page to the next. Further, Applicants agree that each "bead" in the PDF Reference Manual context includes an "R" parameter that defines a page location on which is located its associated article content.

Hence, as the Examiner has suggested this page location is specified in a coordinate system according to the coordinate values assigned to the article content, since the "R" parameter is denoted by 4 values that identify the coordinates of the corners of the rectangle surrounding the associated article content ***starting at the upper right and ending at the lower left corner of the rectangle (contrary to the normal way in which the English language is read – noting that nothing determines for the user the sequence in which the display element content of the respective beads is to be read even if it is displayed line by line according to some sort of undefined interpretation of Warnock display scheme)***.

Thus, as the Examiner has suggested, and Appellants agree, that the respective PDF "beads" are each specified by a rectangle (i.e., two sets of line segments having different directions in a coordinate system – two parallel line segments extending in a first direction and two parallel line segments extending in a second transverse direction relative to the first line segment pair – **not individual line segments each having a line segment starting point and a lime segment ending point as now claimed**.

Furthermore, Appellants agree that in the PDF Reference Manual context each "bead" has an associated "T" parameter, "V" parameter and "N" parameter that effectively define the "thread" on which the "bead" belongs in terms of the previous and subsequent "beads" located along that "thread" relative to the present "bead".

Appellants, however, do not agree that this fact in any way establishes that the PDF Reference Manual "thread" in any way, shape or manner qualifies as a "scroll path" as herein claimed. As indicated above, the "thread" of the PDF Reference Manual acts only like the vectors in the present invention in operating to interconnect various portions (i.e., "beads") of the "scroll path" with one another whether the "scroll path" be a series of beads as in the PDF Reference Manual or a series of display elements read in a specified sequence defined by a line segment(s) as herein claimed.

Hence, Appellants can agree generally that the "beads" of the PDF Reference Manual are linked to what might be characterized as "common threads" (although the "threads" apparently are not continuous in the area of the "beads") such that a user may scroll the PDF Reference Manual "beads" in a sequence defined by the thread (i.e., article section to article section) in order to read an entire article, but ***does not*** thereby admit that the "threads" of the PDF Reference Manual are in any fashion the same as, or equivalent to, the presently claimed "scroll path" (i.e., the display elements in the sequence of the various line segments interconnected by the claimed vectors as herein claimed). The concept of a "thread", while having some features in common with a "scroll path" as claimed, is clearly not the same thing.)

Also, as quoted above, the Examiner incorrectly asserts that "Consequently, as the thread is formed by a plurality of "intervals", namely "beads", which are specified by line segments having different directions in a coordinate section defined by a PDF file, a thread is considered to be a scroll path along which scrolling through a document is to be conducted." ***Applicants do not agree and seriously question whether the Examiner can even arguable support this position***.

The "threads" are not made up of the "beads" in the PDF Reference Manual. Rather, the threads are indications of the sequence in which the various beads should be read. That is the "threads" connect the "beads" as described above, but nothing in the PDF Reference Manual specifies the sequence in which the content of the beads is to be displayed or read.

Accordingly, Appellants respectfully submit that in the PDF Reference Manual context there are simply no "intervals" as herein claimed. Thus, the Examiner attempts to suggest that, the "scroll path" (to the extent that it can be said to exist at all) is the path that defines the sequence in which the content elements contained in each of the respective beads in the defined sequence thereof are to be read (but Appellants respectfully submit that he does so without any provision defining the sequence in which the various contents elements disposed in each sequential bead "along the thread" (i.e., joined by the respective thread portions) are to be read as in the present invention - the latter concept does not in Appellants' view find support are rely upon any comparable feature in the PDF Reference Manual or any of the other art relied upon by the Examiner).

Accordingly, as the Examiner himself has realized, his statement to the effect that " ...the predetermined sequence of the display elements *(in the PDF context)* includes an interval (i.e. bead) or intervals that sequentially together form a scroll path (i.e., "thread"), each interval being specified by line segments defined by coordinate values of a starting point and an ending point in a coordinate system defined by the prespecified unit corresponding to coordinate values assigned to the display elements in the pre-specified unit, as claimed." is not exactly correct. In particular, the Examiner recognizes that the PDF Reference Manual does not explicitly disclose that the display elements forming the intervals defining the scroll path are respectively ***sequentially*** displayed from a line segment starting point to a line segment ending point as the content of the defined intervals of the scroll path is displayed by the display device.

This in Appellants' view is a clear indication that the Examiner himself understands that in comparing the PDF Reference Manual to the present invention he has likened "apples to oranges" in an attempt to recreate Appellants invention from divergent components of the cited art that are otherwise basically inapposite to one another.

Despite the foregoing, however, the Examiner again attempts to avoid the foregoing difficulties in his rejections the present claims based upon the PDF Reference Manual alone by resort to the Warnock and Ota references in combination with the Saito reference. Appellants respectfully submit, however, that the Examiner's efforts still do not rise to the level of a *prima facie case* in support of his rejections under 35 USC 103(a).

For example, the Examiner has relied upon the Saito reference for the proposition that it would be obvious to one of ordinary skill in the art to break a single PDF file down into multiple PDF files because such would allow different access rights to be specified for different portions of a document. Appellants do not dispute the basic concept of Examiner's specific point in this regard, but nevertheless, respectfully point out that the Examiner's reasoning appears to have come full circle from the position that it would have been obvious to combine individual files into a single PDF file via the logic of a Mastie reference (US Patent No. 6,480,866) to the point of dividing up a single PDF file into multiple individual PDF files by the logic of Saito. As was previously discussed and will be again discussed below for the sake of completeness, one skilled in the art would never have combined the individual files into a PDF at all in the first place if the ultimate point was to be to break down that PDF file into small individual PDF files each with its own data and formatting information.

More particularly, as previously stated, Appellants respectfully note that the Examiner has indicated previously that "one ***could*** compose a document stored amongst a plurality of PDF files; he or she would simply store various portions of the document as distinct PDF files, i.e., write a portion of the document and store it as one file, write another portion of the document and store it as another file, etc.

In such circumstances, the storage medium storing all the files would be a data storage medium having a plurality of pre-specified data units (i.e., PDF files) that together define a document thereon like claimed." Applicants in response submitted that the Examiner's attempt to modify the basic concept of a PDF file in this manner is not proper and should be overturned in view of its hindsight method of analysis.

Furthermore, as mentioned previously, according to Section 2143.01 (III) of the Manual of Patent Examining procedure (MPEP), it is settled law that "[t]he mere fact that a reference ***can*** be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination". *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) Also, it is impermissible simply to engage in hindsight reconstruction of the claimed invention, using applicant's structure as a template and selected elements from the references to fill the gaps. *In re Gorman*, 18 USPQ2d 1885 (Fed. Cir. 1991)

Further still, Section 2143.01(VI) of our Manual of Patent Examining Procedure makes it abundantly clear that in order for a disclosure of a reference to conform with the standards for the establishment of a *prima facie* case supporting a rejection under 35 USC 103, the proposed modification of the prior art embodied in a claim of an application cannot change the principal of operation of the prior art reference being applied. In other words, if the proposed modification or combination of the prior art relied upon by the Examiner would change the principal of operation of the prior art invention being modified in an attempt to reach the present invention, then the teachings of the combined references ***are not*** sufficient to establish a *prima facie* case of obviousness under the appropriate stands for the same. *In re Ratti*, 280 F.2d 810, 123 USPQ 349 (CCPA, 1959)

In view of these Rules and precedents, Applicants have previously (and still) respectfully submit that the Examiner has expanded of the definition of a PDF file to the extreme of being the same as a pre-specified data unit or distinct file like herein claimed and this appears to clearly be an attempt to modify the principals of operation of the PDF file disclosed in the PDF Reference Manual that is improper under the above standards.

As was mentioned in Appellants' previous submissions in this prosecution, the alternative of combining a plurality of individual PDF files so as to make up a complete document and thereafter reformatting the same so as to conform with one another in the manner contemplated by Mastie is a concept that is nowhere disclosed, taught or suggested in the art, and is an idea which the Appellants respectfully submit not only makes very little sense, but also would not be expected to be a path adopted by one of ordinary skill in the art. Instead, Appellants respectfully submit that it would be expected that one skilled in the art would simply create a single PDF file from the beginning wherein the page objects of each page were utilized in conjunction with the common formatting of a typical PDF document. In other words, it would make very little sense to one of ordinary skill in the art to create and store a plurality of individual PDF page files for the purpose of forming a document and thereafter to reformat those stored individual PDF page files into a single combined document having a single PDF document format. Clearly, it would make more sense to create a basic PDF document shell and incorporate the page object data therein such that it all would have the same formatting from the outset.

Also as mentioned, the theoretical possibility of the combination of a plurality of individual PDF files that each define a document (i.e., a plurality of documents) stored separately so as to make up a document postulated by the Examiner as meeting the limitations of the present claims has not been shown to have been adopted in, or even seriously considered by, the art even though the components thereof have been readily available for some time. Applicants respectfully submit that the reason for this is that one of ordinary skill in the art simply would not make the combination postulated by the Examiner for the reasons discussed above.

Again it is to be noted that the standards of patentability under 35 USC 103(a) require that the suggestion to combine the art not be derives from an attempt to duplicate the Appellants claims by the formation of a mosaic combination of the art fit into the framework of the Appellants' claims. The test of patentability, therefore, is not a hindsight reconstruction with the benefit of Appellants' disclosure as a guide, but rather an independent assembly of the art in a combination suggested thereby or by the level of knowledge presumed to be possessed by one of ordinary skill in the art at the time that the present invention was made.

Thus, the Mastie reference, previously stated to be unnecessary to his rejections by the Examiner, nevertheless is a clear indication of the art's tendency to move toward the concept of common formatting for all of the files making up a document that is manifest in the PDF Reference Manual. Further, as will appear in more detail below, the Examiner's insistence upon a reliance upon the thread and bead concepts of the PDF Reference Manual regarding the scrolling capabilities provided by the plurality of individual PDF files that he has postulated as making up a document as being comparable to the present pre-specified data units ***appears to totally disregard of the comments presented at pages 30-31 of Applicant's Amendment After Final Rejection originally filed on 27 September 2006 as well as the comments appearing at pages 25-28 of Applicants' Amendment of 13 August 2007) regarding the correct interpretation of "scrolling", "intervals" and the phraseology placed into the currently pending claims with respect to the same. Indeed, the concept of the PDF Reference Manual is that the entire document will be stored together with the formatting and similar information separate from the content information so as to more conveniently provide access to various of the documents portions without each having to have its own format and display information separate from that stored in common.***

In other, words, Appellants respectfully submit that the Examiner's outstanding rejections require an improper modification of the principals of operation of the PDF document format in order for the Examiner's currently outstanding rejections to make sense. Appellants respectfully submit that such twisting and turning of the meaning of the art to fit the various parameters that the Examiner is attempting to locate in and combine from that prior art is not proper.

Furthermore, Appellants previously have ***submitted amendments in this case calculated to clarify (1) the scroll path of the present invention is the actual content of a prescribed path from display element to display element; and (2) that the present invention does not require the scroll display itself to be initiated at the starting point and progress to the end point claimed with respect to the prespecified data units/distinct files herein claimed as opposed to being capable of running not only within the prespecified data units, but also between the same.***

Appellants respectfully re-emphasize that one can never lose sight of the fact that the PDF system is different than that of the system of the present invention at least in that the PDF system contemplates that the management information for all of the various data files, groups or the like is centrally stored such that multiple data units are controlled by the same management information. As has been explained elsewhere, the PDF concept has advantages in some cases, but the very features that provide those advantages in those cases act to distinguish the present invention from the PDF system.

Accordingly, it will be recalled that the intervals forming a scroll path in the present invention are specified by line segments respectively defined by coordinate values of a ***line segment*** starting point and a ***line segment*** end point according to coordinate values assigned to the display elements in the pre-specified unit (not the content of defined rectangles without direction as to how that content is to be presented to and/or read by user despite the Examiner's attempt to suggest otherwise). More particularly, despite the Examiner's detailed analysis of the Portable Document Format Reference Manual, the fact remains that present invention stores the display data associated with each data grouping together with its associated management information, rather than in a form dependent upon selections from the catalog of display and formatting functions (management information) stored for the entire document as is done in a PDF document file.

This display data includes image object data, management information associated with each stored image object data and scroll information associated with each image object data, **in distinct, separately controllable pre-specified units (i.e., distinct files) containing only a portion of all of the display data associated with a document to be stored on the storage medium and in direct association with the management information specifically associated therewith**.

Also, despite the Examiner's attempts to infer otherwise, this is different from the so-called dynamic formatting referred to by the Warnock, et al. reference as being unsatisfactory as well as being different from the disclosures of the Portable Document Format Reference Manual. In both of those references it is necessary to store the ***entire document or the like*** in a computer memory as a so-called "PDF (Portable Document Format) document" before any portion ("pre-specified data unit") can be accessed or displayed.

Appellants therefore again respectfully submit and emphasize that a close reading of the PDF Manual clearly suggests that while the Examiner's factual analysis concerning the "bead" concept of identification of article segments and the page co-ordinate definition of each article segment may seem to be supported by the PDF Manual, the Examiner has forgotten (or not noticed) that ***no matter how one approaches the PDF format, it is necessary in the use of each page, or article portion thereof to refer back to information stored as part of the whole PDF file outside of the so-called "page objects" (Note: the PDF Reference Manual discusses PDF files as representative of entire documents including a header, a body, a cross-reference table and a trailer (see chapter 5) wherein the body is made up of various indirect objects such as fonts, pages and sampled images, see page 62 of PDF Reference Manual).***

Thus, despite other similarities to the present invention, in the article and/or page context, the PDF Reference Manual makes it clear that each selected portion of a so-called "page" that is defined by the so-called "beads" must refer back to the so-called "Contents" parameter of the "page" of which it forms a part. Hence, each article portion must refer back at least to the page information from which it is extracted in order to be appropriately utilized in a scrolling display of an entire article (particularly an entire article having different portions on different pages).

In fact, while it is possible to create PDF units containing one or more separate document pages, there is no provision in the PDF format for saving the data and management information representing defined article segments as separate pre-specified units (Claim 28) or distinct files (claim 38).

Further, while as has been mentioned and discussed in great detail elsewhere in this prosecution, the PDF Manual at certain points seems to broadly suggests that each so-called "page" may be basically separate unto itself as an abstract concept, ***the true, real world fact is that at least part of the display information and associated scroll information for each such page depends upon information created and saved in the body portion of the PDF file separately from the page objects (data) in question during the course of the creation and saving of an entire PDF format type document.***

Consequently, the pre-specified units of the present invention to the extent that they may individually represent pages or article portions contain within themselves all of their own display information, including scroll display control information. The PDF Document Format, on the other hand, does not contemplate that each so-called "page" is to be a pre-specified unit in the sense of the present invention. This is because the display control including scroll display information (for example, the required drivers) are embedded in the PDF file and associated with the data to be displayed by higher level operators associated with the data via catalogs that assemble the various objects making up the body of the PDF file to achieve the desired complete document display.

Thus, while the PDF Reference Manual at first reading appears to be discussing the manipulation of documents, pages of documents and article threads running through the documents, a more detailed reading of that manual indicates that the foregoing is but the highest level of explanation of the actual PDF concept. ***This is readily apparent to anyone who has used a PDF document obtained from an outside source from the fact that the entire document has to be downloaded and processed by the computer involved before any part of the PDF document can be accessed for use.***

When reduced to its basics, therefore, Appellants respectfully submit that the PDF concept stores "documents" in the form of "pages" (i.e., groups of page objects) separately from at least some of the data contemplated as being necessary for display of the individual image data (page objects), and separately from all of the other information necessary for the association of that image data ("page objects) in the form of appropriate control sequences including the parameters required to achieve the association and control of the display of various combinations of the image data ("page objects") as desired.

Perhaps most importantly regarding the currently outstanding rejections, Appellants respectfully refer the Board to pages 81-97 of the present specification whereat it is explained that the arrows located in the Partial Blocks identified in Fig. 37 within the respective pre-specified display units are the "intervals" that together form a "scroll path" of the display element content along which said scroll display is to be conducted in the present invention and the method by which that is accomplished is explained. **In other words, the "scroll path" in the present claims is the path made up of the sequential display of the actual display elements that are to be displayed, not the path connecting rectangles surrounding various portions of an article content to be displayed together as a group simultaneously according to their respective positions along the "scroll path" (or thread) of the PDF Reference Manual that is not the same as the scroll path of the present invention. (See present specification at page 89, line 24 to Page 92, line 18)**

To clarify the latter point, the claims of this application were previously amended so as to clearly indicate that the "intervals" as herein claimed refer to portions of the actual display element content that together make up a "scroll path" that defines the display element content of the respective pre-specified display data units or portions thereof that are to form the actual content of the "scroll display" (i.e., the predetermined sequence of data elements").

Thus, each "interval" in the present invention has a direction associated with it, and some or all of those directions may be the same or different depending upon the particular scroll path (data content) to be displayed. Accordingly, the portion of the present invention that links the "intervals" with one another is part of the information for selecting among the display elements for scroll display to be found in the "predetermined sequence" in which the display elements are displayed. Further, the information for selecting among the display elements for scroll display linking the "intervals" may take the form of information specifying vectors associated with the content of the pre-specified units or distinct files herein claimed.

Accordingly, in addition to the reasons discussed above that distinguish the present invention from the disclosure of the PDF Reference Manual, Appellants respectfully submit that the present invention is clearly and unambiguously distinct from any and/or all of the art cited by the Examiner taken alone, or any combination, by the fact that the "scroll path" hereinabove claimed is a scroll path defined by "a line segment starting point and a line segment end point in a coordinate system defined by said pre-specified unit according to coordinate values assigned to the display elements in said pre-specified unit" (i.e., the coordinate system used to define the scroll path is the coordinate system defined by the pre-specified unit itself and the intervals are the directors that establish the scroll path from each piece of data to the next). This is to be distinguished from a scroll path of the PDF Reference Manual that is alleged by the Examiner to be defined by "a start point (i.e., an upper right corner) and an end point (i.e., a lower left corner).

The "R" parameter referred to by the Examiner in this regard defines a region (a location of a bead within the coordinate system of the document) not the "interval" herein claimed as discussed above. Hence, it will be understood that it is nowhere described in the PDF Reference Manual that scroll display is to be initiated at the upper right corner specified by the "R" parameter as one of the corners of the block (a starting point) of display data constituting the associated "bead". Instead, in the PDF environment, the various portions or sections of a document defined by the "R" parameter are displayed simultaneously as groups (blocks) wherein 4 values identify the coordinate values of the corners of a rectangle surrounding the associated simultaneously displayed article content in a coordinate system assigned to the content of the entire document of which those portions form a part by the PDF file as described in the PDF Reference Manual.

It is to be noted in the latter regard again that while the Examiner would like to say that each pre-specified unit is a PDF file, the fact is that as discussed above even if the situation starts out with each pre-specified unit being a separate PDF file, when those files are combined to make a single document (as now specifically claimed) they lose their individuality due to the necessity for common formatting as discussed above with regard to Mastie. Thus, the scrolling of the present invention is from element to element within each pre-specified unit while the scrolling in the PDF environment is from block to block as defined by the "R" parameter in the coordinate system of the entire document, not the coordinate system within the pre-specified unit as herein claimed.

Perhaps more clearly and distinctly stated, the "scrolling" of the present invention is directed to a "scroll path" formed within the actual display element content in the present specification and claims rather than to a scroll path constituting "beads" defining blocks of simultaneously displayed element data joined by "threads" leading sequentially from one bead to the next. Accordingly, it will be understood that the "scroll path" as defined and contemplated by the present invention delineates the actual display content obtained by scrolling with the gaps therebetween delineated by vectors (links) pointing to the next sequential portion of the actual display data. Accordingly, the "scroll path" contemplated by the present specification and claims is not a series of blocks ("beads") of data that are each to be presented to the user simultaneously as units (separate blocks) intermittently so as to be readable by a user in a sequence determined by so-called "threads" connecting the various "beads" as in the PDF Reference Manual disclosure. Rather, the "scroll path" of the present invention is the actual content of a prescribed path from display element to display element, not block of display elements to block of display elements as in the PDF Reference Manual context.

Hence, the sequential display of blocks of text that make up an article of interest is not the same as the sequential display of the words that make up the text of the article of interest. In the one the blocks of information are presented simultaneously as a group for the use of the user intermittently so as to provide the user with time to read the same, in the other, the sequence of use and the speed of the presentation of the content of the article is predetermined for the user and presented in the sequence in which it is to be used at a predetermined speed.

Appellants respectfully submit that the foregoing concepts (that are believed to be clearly determinative of the distinct differences between the present invention and the PDF Reference Manual disclosure) have been totally disregarded (or not recognized) by the Examiner heretofore during this prosecution. In addition, Applicants respectfully submit that the Examiner cannot avoid the logical conclusions that are derived from the foregoing simply by reference to the fact that the Warnock reference contemplates that the simultaneously displayed blocks that form the scroll path of the combination of references referred to by the Examiner may have to be scanned and panned such that they are displayed within the available screen area in a sequence starting from the top of the block to the bottom thereof or vice versa according to the available screen area and the format selected for the display.

In other words, the Examiner correctly has noted that the simultaneous available display of the content of each block of the scroll path of the combination of references relied upon to defeat the patentability of the present invention may not always be possible in view of the available screen areas for that display. In that case, as noted above, the Warnock reference suggests that all of the information concerning a respective block (including its display content and it management information) will be made available simultaneously. Thereafter, according to the available size of the display screen and the format adopted for the display of the display content contained within the block, Warnock indicates that the simultaneously available area of the block may be actually be displayed starting either at the top or the bottom of the available display content and panned either down or up until the entire block area has be projected onto the screen. The Examiner suggests that this is indicative of the same thing as the sequential scrolling of the content data along the line segment in the direction specified by the present claims. ***Applicants cannot agree with the Examiner's latter point either.***

The problem with the Examiner's reasoning in the above regard is that it assumes that the Warnock reference is capable of providing a directionality and a sequentially to the scroll path of the PDF Reference Manual/Saito combination that Applicants have demonstrated above to be faulty in terms of the equivalence of the scroll path of each above. Thus, it will be understood that in the present invention the scroll path runs from content element to content element along each line segment in a defined sequence, but in the combination postulated by the Examiner such is not the case. Thus, in the combination postulated by the Examiner the user is presented with an area corresponding to a block containing various content information with the desire of displaying the entire block to the user on a screen of a prespecified size.

Depending upon the relative sizes of the block defined area and the screen area as well as the format selected for the display on the predetermined screen area, Warnock recognizes that it may not always be possible to display the entire available quantum of content data at the same time and elects to display the same starting from a top or bottom section and thereafter panning down or up as appropriate until all of the available data elements as they appear in the block have been presented to the user. The Examiner suggests that this is a disclosure of the sequential scrolling of the content data as in the present invention, but Applicants cannot agree.

In particular, in the combination proposed by the Examiner an entire block of content data is available *simultaneously* rather than individual items of content data being available for display *sequentially*. This is the result of the distinctions between the scroll path of the present invention and the scroll path of the combined references relied upon by the Examiner and discussed at length above.

Furthermore, it is this feature of the present invention that allows the present invention to display the contents elements "as they sequentially appear along the scroll path" instead of displaying the area of each successive block of the scroll path of the combination postulated by the Examiner in the most easily viewed fashion (without any guidance from within the system as to the sequence in which the content elements contained in the block should be displayed – for example, the English language is read from left to right and top to bottom thereby suggesting one way in which the simultaneously available images of the content elements contained within a block might be scanned onto the screen, but other languages and/or data might be better displayed in a different sequence or manner.

Accordingly, Appellants respectfully submit that the Warnock disclosure of a panning of a simultaneously available image of the content data contained in a block is not the same as, and does not teach, disclose or suggest the sequential display of the content elements made sequentially available relative to one another in a sequential scroll path such as that herein claimed.

IX. CONCLUSION

Appellants respectfully submit that the foregoing remarks totally and definitively overcome the Examiner's currently outstanding rejections under 35 USC 103(a) as presented in the currently outstanding FINAL Official Action in the view of the facts and argument of record in the present prosecution. In particular, Appellants respectfully submit that the Examiner consistently has exaggerated and/or otherwise attributed teachings, disclosures and suggestions to the PDF Reference Manual and the other cited and relied upon art that are not actually present therein or derivable therefrom. Furthermore, absent those erroneous determinations concerning the content (and/or suggestions) of the prior art currently of record in this application, Appellants respectfully submit that the Examiner could not have reasonably reached the conclusion that the present invention is unpatentable under 35 USC 103(a) over, the Bienz, et al., the Saito et al and Warnock et al references. Consequently, Appellants respectfully submit that the instant invention is both novel and inventive over the art relied upon by the Examiner, and respectfully request a decision so holding on this Appeal.

Finally, as mentioned above, although it is not believed that the present submission requires any further fee to secure its consideration by the Patent Office Board of Appeals and Interferences, the Examiner or other appropriate officer, of the United States Patent and Trademark Office, the undersigned hereby authorizes the charge of any such fee that may be deemed to be due, appropriate or otherwise required, or the credit of any overpayment, to the deposit account of the undersigned, Deposit Account **04-1105** .

Respectfully submitted,

Date: January 20, 2010

By: _____

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APPENDICES

CLAIMS APPENDIX

1-27. (Canceled, without prejudice)

28. (Rejected) A data storage medium for use with a display device,

said data storage medium having recorded thereon a plurality of pre-specified data units that together define a single complete document,

wherein

each pre-specified data unit includes (i) a series of display elements for display by the display device, and (ii) management elements associated with said display elements, said management elements including all information necessary for the display device to display a predetermined sequence of said display elements as a scroll display, and

wherein

said predetermined sequence of said display elements includes an interval or intervals that sequentially together form a scroll path, each said interval being specified by a line segment defined by coordinate values of a starting point and an end point in a coordinate system defined by said pre-specified unit corresponding to coordinate values assigned to the display elements in said prespecified unit, such that the display elements forming the intervals defining said scroll path are respectively sequentially displayed from said starting point to said end point thereof as said scroll path is displayed by said display device.

29. Canceled, without prejudice.

30. Canceled, without prejudice.

31. (Rejected) A data storage medium as defined in claim 28,
characterized in that said predetermined sequence of display elements also includes linking means for causing said display device to link an end point of a first scroll display path with a starting point of another scroll display path.

32. (Rejected) A data storage medium as defined in Claim 28,
characterized in that said management elements include elements for controlling a scroll display speed.

33. (Rejected) A data storage medium
as defined in claim 28, characterized in that the management elements include management elements associated with selected areas of said coordinate system defined by said pre-specified unit associated with said selected ones or said contiguous groupings of said display elements for scroll display.

34. (Rejected) A data storage medium

as defined in claim 28, characterized in that the management elements include management elements specifying a scale of enlargement or reduction of said display elements or contiguous groupings of display elements located along a scroll path for scroll display.

35. (Rejected) A data storage medium according to Claim 28

wherein the management elements in each pre-specified data unit include display information and scroll display information, and

wherein the scroll display information includes synchronous reproduction information for specifying non-motionless display elements to be reproduced in synchronism with a scroll display of other display elements.

36. (Rejected) A display device for displaying

display elements stored on a data storage medium as defined in any one of claims 28, 31, 32, 33, 34 or 35, comprising a display controller for performing a scroll display of said predetermined sequence of said display elements.

37. (Rejected) A display device as defined in claim 36, further comprising a scroll indicating means for scroll display , and wherein said scroll display is conducted only while a user instructs said display controller to perform scroll display in either forward or backward directions along a scroll path.

38. (Rejected) A data storage medium for use with a display device, said data storage medium having display data associated with a single complete document recorded thereon, said display data including a plurality of image data objects for display on a display screen of said display device and all management information associated with each of said image data objects required by said display device for the scroll display, thereof, comprising:

a computer readable medium on which said display data is recorded in the form of distinct files, each said distinct file containing a pre-selected portion of said display data including at least one of said plurality of image data objects along with all of the respective associated management information required by said display device for the scroll display, thereof, wherein said management information includes scroll path information including and interval or intervals that together form a scroll path, each said interval being specified by a line segment defined by coordinate values of a starting point and an end point in a coordinate system defined by said distinct file corresponding to coordinate values assigned to said image data objects in said distinct file,

such that the image data objects forming the intervals defining said scroll path are respectively sequentially displayed from said starting point to said end point thereof as said scroll path is displayed by said display device.

39. Canceled, without prejudice.

40. Canceled, without prejudice.

41. (Rejected) A data storage medium as defined in claim 38, characterized in that the management information associated with the image data objects contained in each one of said distinct files includes information for linking a scroll display of selected ones or contiguous groups of image data objects contained in that file with selected ones or contiguous groups of image data objects located on a scroll path contained in at least another one of said distinct files.

42. (Rejected) A data storage medium

as defined in claim 38, characterized in that the management information associated with the image data objects or contiguous groups of image data objects in each said distinct file required for the scroll display of said image data objects or contiguous groups of said image data objects includes scroll display speed information.

43. (Rejected) A data storage medium as defined in claim 38,

characterized in that the management information required by said display device for the scroll display of said image data objects or contiguous groups of said image data objects includes information specifying a scroll display area on a display screen of said display device within which said scroll display of said image data objects or said contiguous groups of said image data objects is to occur.

44. (Rejected) A data storage medium as defined in claim 38,

characterized in that the management information required by said display device for the scroll display of said image data objects or said contiguous groups of said image data objects includes information specifying a scale of enlargement or reduction of a display area for scroll display on a display screen of said display device within which said scroll display is to occur.

45. (Rejected) A data storage medium

as defined in claim 38, characterized in that said management information required for scroll display by said display device associated with said image data objects or contiguous groups of said image data objects includes synchronous reproduction information for specifying other image data objects to be displayed in synchronism with the scroll display of each said image data object or contiguous groups of image data objects.

46. (Rejected) A display device for displaying

image data objects or contiguous groups of image data objects contained in at least one distinct file recorded on a data storage medium as defined any one of claims 38, 41, 42, 43, 44 or 45, comprising a display controller performing scroll display of said image data objects or contiguous groups of said image data objects located on a scroll path based on management information associated with those image data objects or contiguous groups of said image data objects required by said display device for the scroll display thereof.

47. (Rejected) A display device as defined in claim 46, further

comprising a scroll indicating means for monitoring the scroll display of said image data objects or contiguous groups of said image data objects on a display screen of said display device, wherein said scroll display is conducted based on the management information only while a user instructs said display controller to perform said scroll display in either forward or backward directions along a selected scroll path.

48. (Cancelled, without prejudice)

49. (Cancelled, without prejudice)

50. (Rejected) A data storage medium according to claim 28, wherein vectors connect the intervals of said scroll path; and

wherein said display device conducts a sequential display of said predetermined sequence of display elements along each of the sequence of intervals in said scroll path as determined by said vectors.

51. (Cancelled, without prejudice)

52. (Cancelled, without prejudice)

53. (Rejected) A data storage medium according to claim 38, wherein vectors connect the intervals of said scroll path, and

wherein said display device conducts a sequential display of said image data objects or contiguous groups of image data objects along each of the sequence of intervals in said scroll path as determined by said vectors.

54. (Rejected) A data storage medium as defined in claim 28, characterized in that the scroll display control information includes a scale of enlargement or reduction of a display area for scroll display on a screen of said display device.

55. (Rejected) A data storage medium as defined in claim 38, characterized in that the management information required by said display device for the scroll display of said image data objects or contiguous groups of image data objects includes a scale of enlargement or reduction of a display area for scroll display on a screen of said display device.

EVIDENCE APPENDIX

Not Applicable

RELATED PROCEEDINGS APPENDIX

Not Applicable